NCLB Summer Math Institute 2011

Faculty Name: Brian Zelinski

School: Greenwood High School

Grade Level: 9

1. Teaching Objective(s): Pre-Algebra
   Data Analysis & Probability
   5. Interpret, organize, and make predictions about a variety of data using concepts of probability.
      > c. Make and list conjectures by calculating probability for experimental or simulated contexts. (DOK 3)
2. Instructional Activities
   a. Present the terms and definitions of probability (probability, factor, outcome, percent, and random) with examples using Power Point.
   b. Hand out and explain "M&M Probability Bingo."
      i. Give students a hand out that has 11 boxes on it with numbers from 2-12 in each box. Also, there will be a second sheet that has charting information.
      ii. Give each students 12 M&M's.
      iii. Explain the rules of "M&M Probability Bingo."
         1. Students will take M&M's and place them on any number on their paper that has boxes labeled 2-12. Students are allowed to leave a box empty and can also place as many M&M's on one number if they choose to do so.
         2. Teacher will roll a pair of dice. If any of their numbers come up then the student will remove the M&M's from that particular spot.
         3. Teacher will repeat rolls until a student has been able to remove all M&M's from their paper, making them the winner.
      iv. Once a couple of rounds of the game have been played, have the students use the chart to find the probabilities of what number will be rolled the most. Then have the students create a strategy then play the game again and see if the students use what they have discovered about the probability of certain numbers be rolled by the dice as strategy.

      c.   Show video that displays the probabilities of each number when rolled.

3. Materials and Resources
    a. Youtube.com
    b. Computer (for internet) and projector
    c. Microsoft Power Point
    d. Discoverkids.com
    e. M&M's
    f. Pair of Dice
    g. M&M Probability Bingo Game board
    h. *Navigating through Probability in Grades 9-12.*

4. Assessment
    a. Group Discussion: Have students orally talk about what they observed about the probability of the which number will be rolled and how that effected their strategy of playing the game.